THE ASTROPHYSICAL JOURNAL, 184:L99–L100, 1973 September 1

ADDENDUM

Originally no light curve was published for my proposed HZ Her model ("The Reflection Effect in HZ Herculis," by Robert E. Wilson, Ap. J. [*Letters*], **181**, L75, 1973) because of uniqueness problems. That is, it should be possible to satisfy the observations with more than one surface brightness distribution; and without a structural model, one does not know which distribution to choose. However, several persons have expressed a wish to see a light curve based on at least one such distribution, and this is provided in figure 2, where the computed curve is compared with the observations by J. N. Bahcall and N. A. Bahcall (Ap. J. [*Letters*], **178**, L1). The chosen distribution is very simple, being essentially constant at 4 times the undisturbed brightness for $+1.0 \geqslant \cos\alpha \geqslant -0.4$ and equal to the undisturbed brightness for $\cos\alpha < -0.4$, where α is the angle between the surface normal and the direction to the X-ray source. The light curve is based on numerical integrations over a tidally distorted component which fills its Roche lobe. The orbital inclination is 80°, and the mass ratio, m_X/m_{optical}, is 0.4. The broad maximum seen in the observations is reproduced and is largely a consequence of geometrical ellipticity. That is, near maximum, geometrical ellipticity produces a curvature opposite to that of the reflection effect, so the two

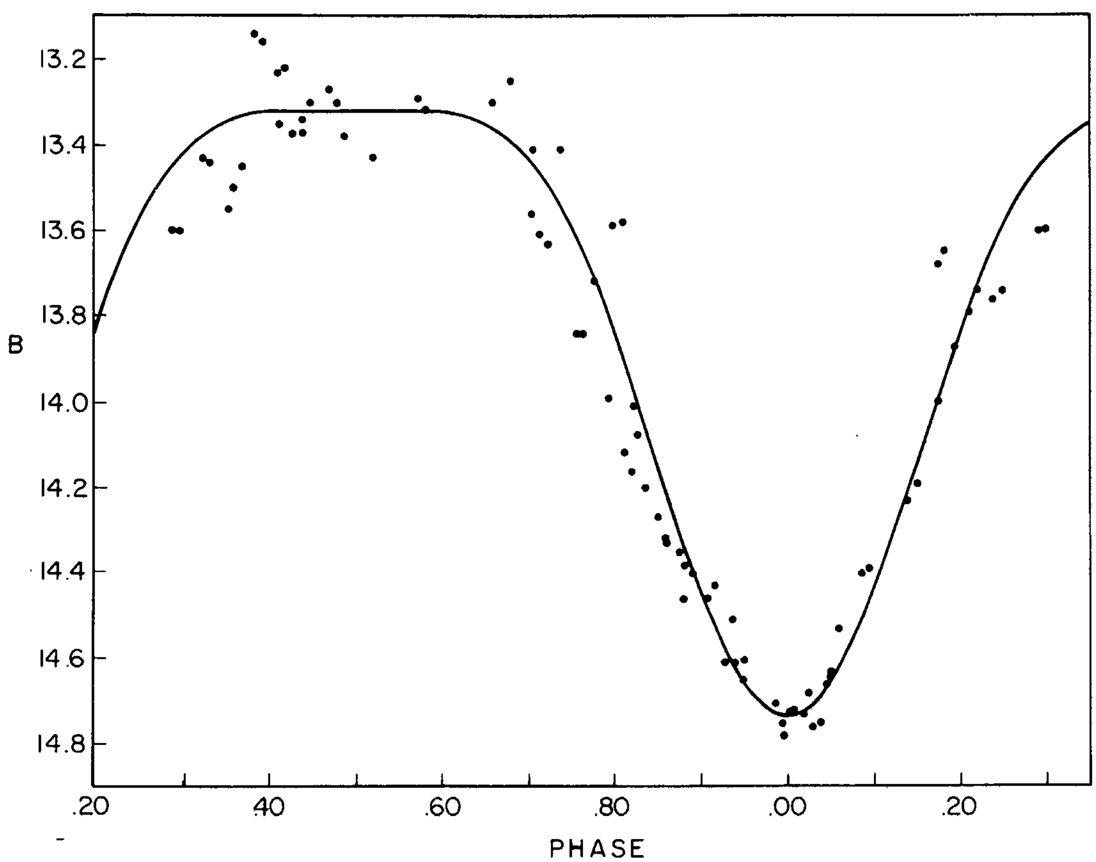

FIG. 2.—Computed HZ Her light curve compared with the observations by Bahcall and Bahcall.

effects partly cancel, giving a region of slow variation. At minimum, ellipticity and reflection have curvatures of the same sense, which in part accounts for the sharpness of the minimum.

I am grateful to Dr. Paul C. Joss for providing the data plotted in Figure 2. This work was done under the NAS-NRC Senior Research Associate Program, while the author was on leave from the University of South Florida (Department of Astronomy).

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